Measuring Media Influence on U.S. State Courts^{*}

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Abstract

Media coverage has been one of the main channels through which voters acquire information about public officials' behavior in modern democracy. In this research, we investigate the influence of newspaper coverage on *courts*, the branch of government that is often regarded as the most insulated from public opinions. Specifically, we focus on the influence of newspaper coverage on criminal sentencing decisions in U.S. state trial courts. We pose three questions that are essential to understanding the relationship between media and court decisions: (1) how often do newspapers convey information about judges to voters?; (2) does the likelihood of press coverage affect harshness of sentencing decisions?; and (3) does media influence on court decisions depend on the mechanisms through which judges are selected?

To address these questions, we use a *newly collected data set* on the frequency of newspaper coverage of approximately 10,000 state trial court judges from 45 states. In addition, we construct a proxy measure of active media coverage – the degree of overlap ("*congruence*") between judicial districts and circulation areas of newspapers – for more than 1,000 judicial districts in the nation, in order to address the endogeneity of press coverage.

First, we find that there are on average 80-90 newspaper articles about judges in a district in the trial court per year and newspaper. Second, active media coverage does not influence court decisions independently of voter preferences, but it substantially magnifies the influence of voter preferences on court decisions. Third, media influence on court decisions depends very much on judicial selection mechanisms. Active newspaper coverage significantly magnifies the influence of the influence of voters' preferences on court decisions only when judges are elected.

Keywords: Court, Media, Sentencing, Crime, Appointment, Election, Voter Information

JEL Classification: H1, H7, K4, L8

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1 Introduction

Media coverage has been one of the main channels through which voters acquire information about public officials' behavior in modern democracy. In this study, we investigate the influence of newspaper coverage on *courts*, the branch of government that is often regarded as the most insulated from public opinions. Specifically, we focus on the influence of newspaper coverage on criminal sentencing decisions in *U.S. state trial courts*.

There are several reasons why U.S. state courts is an important context for analyzing media influence. First, they play an important role in the American society. State courts deal with more than 90 percent of civil and felony cases in the U.S. In 2006, state courts handled 21.6 million felony cases and 17.3 million civil cases. In 2005, state courts spent 17.7 billion dollars while federal courts spent 10.8 billion dollars. Second, the set of tasks handled by state trial court judges is quite homogenous across states. Therefore, their decisions serve as a good measure of "behavior of public officials" in analyzing government accountability. Third, judiciary is often regarded to be highly insulated from public opinions compared with other branches of the government. Estimating the effect of media on judiciary can give us a good understanding of the potential "lower bound" of the overall media influence on governments. Fourth, there is an interesting variation in the mechanisms by which state court judges are selected: in many states, judges are initially appointed by the governor or the legislature, and then either get life-tenured or face a non-competitive approval (yes-or-no) vote by voters for subsequent terms; in other states, judges are selected and retained through competitive elections. Analyzing media influence on state courts provides us with a unique opportunity to understand the interaction between selection systems of public officials and voter information.

We address three questions that are essential to understanding the relationship between media and court decisions: (1) how often do newspapers convey information about judges to voters?; (2) does the likelihood of press coverage affect harshness of sentencing decisions?; and (3) does media influence on court decisions depend on the mechanisms through which judges are selected?

To capture a factor that causes newspaper coverage of courts to vary across jurisdictions, we construct a measure, *congruence* (à la Snyder and Strömberg (2010)), which captures the degree of a fit between judicial districts and local newspaper markets. The basic premise behind the usage of congruence measure, which is empirically validated in our analysis, is that newspapers cover more stories about court cases in a jurisdiction (trial court district) when a large share of readers reside in the jurisdiction. That is, if a jurisdiction constitutes a large share of readers of the newspapers sold in it, voters can get more information about court cases in that jurisdiction, compared with

those who live in a jurisdiction that does not.

In order to document the amount of press coverage about judges and to ensure that our congruence measure captures significant variation in press coverage, we use a *newly collected data set* on the *frequency of newspaper coverage* of approximately 10,000 state trial court judges in the nation. We also construct the *congruence measure* for more than 1,000 judicial districts in 45 states, combining a newly collected data on the composition of judicial districts and the county-level newspaper circulation data from the Audit Bureau of Circulation. In the main analysis, we build an empirical linkage between congruence and harshness of criminal sentencing, using a detailed data set on 2.5 million sentencing decisions from the National Judicial Reporting Program.

Our result shows that there are on average 80-90 newspaper articles that mention state trial court judges' name, per district, newspaper and year. We also find a salient positive relationship between the congruence measure and the amount of newspaper coverage on state trial court judges. In addition, we compare the amount of press coverage for appointed and elected judges, and we find that selection mechanisms of judges do not significantly affect the amount of press coverage.

Secondly, we find a substantial media influence on court decisions. Specifically, we find that press coverage does *not* influence sentencing decisions *independently of voter preferences*. But, it *magnifies the effect of voters preferences* on criminal sentencing decisions by about two-folds. Additionally, this effect is present mainly in violent crime cases, and it is insignificant in property crime cases or drug cases.

Lastly, media influence on court decisions is very dependent on the mechanisms by which judges are selected. Specifically, we find that the degree of media influence on criminal sentencing decisions is substantially larger when judges are elected.

The remainder of this paper is organized as follows. In the next section, we introduce the political economy literature on media and the literature on U.S. state courts. In Section 3, we introduce the institutional background of the U.S. state court system. In Section 4, we introduce our congruence measure and document its major feature in our data. In Section 5, we describe our data on the amount of press coverage on judges, and we document the relationship between congruence/reader-share and the amount of coverage. In Section 6, we discuss the measure that we use for voter preferences for crime and punishment. In Section 7, we document the main results.

2 Related Literature

Our study contributes to the growing political economy literature on the impact of media on public policy outcomes. Recently, there has been significant research about media impact on government spending such as studies by Strömberg (2004) and Besley and Burgess (2002). While the focus of this stream of research has been on media penetration, we focus on the likelihood of press coverage holding media penetration constant. In this sense, our research is an extension of Snyder and Strömberg (2010). There has also been evidence on media influence on elections, e.g., DellaVigna and Kaplan (2007) and Gentzkow (2006). We contribute to the literature by documenting the interaction between political process, specifically selection mechanisms and media.

This study also contributes to the growing literature of comparing the behavior of non-elected and elected public officials. Recent studies by Alesina and Tabellini (2007, 2008) theoretically analyze what types of policy tasks are better performed by non-elected bureaucrats as opposed to elected politicians, focusing on the reelection concerns of politicians vs. the career concerns of bureaucrats. In another important paper, Besley and Coate (2003) compare policy outcomes from appointment and election as selection procedures. Specifically, they show that selecting regulators through election as opposed to appointment leads to issue-unbundling and leads to selecting the types of regulators who will conform to voter preferences. There have also been numerous efforts to document the politico-economic causes and consequences of different judicial selection mechanisms, such as Hanssen (2004a, 2004b), Hall (2001), Besley and Payne (2003), Bohn and Inman (1996). Several studies in this stream of research document the empirical relationship between the selection mechanisms and court decisions, e.g, Lim (2008), Huber and Gordon (2004, 2007), Gelman et al. (2004), Blume and Eisenberg (1999), Tabarrok and Helland (1999). Our study deepens understanding of this issue further by providing empirical evidence on the role of voter information in the mechanism through which the difference between appointed and elected public officials behavior is generated.

3 Institutional Background of the State Court System

In this section, we introduce basic institutional backgrounds of the U.S. state court system. In most states, state court system has three layers: state supreme court, state appellate court, and state trial court. State trial courts are often called district court, circuit court, or superior court.

State trial courts are courts of general jurisdiction: they have original jurisdiction over civil cases with non-trivial amount in dispute and felony crime cases. That is, civil cases with nontrivial

amount in dispute and felony crime cases are initially filed to trial courts. Traffic cases and misdemeanor cases are typically handled local courts, usually called county courts or municipal courts, and they are *not* usually by state trial courts.

3.1 Judicial District

In most states, the state trial court is divided to multiple judicial districts. Usually, the geographic basis of judicial districts is county, in the sense that boundaries of a judicial district do not usually cut through the boundaries of a county. In most states, a judicial district has multiple judges.

There are approximately 1,700 judicial districts of state trial courts nationwide. As for the average size of a judicial district, there are 1.8 counties per judicial district and they hold an average population of just under 170,000. On average there are 9 judges presiding in each district.

We have collected information on the geographic boundaries of these judicial districts from 1982 to 2004. We did not collect data for Alaska, Connecticut, Massachusetts, Texas and Virginia, where the county is not the primary geographical unit of the judicial districts. In total, we have data on 1,181 judicial districts. Of the 544 districts for which we do not have geographical information, 452 are in Texas. The procedure we used was to first allocate each county to a court using *The American Bench* 2004-2005 edition. To find out if and when each state's judicial district lines were redrawn, we contacted various state officials, typically the director of the administrative office of the judicial branch. We then used the data in the annual series of *The American Bench* to track each such change.

Table 1 on page 6 shows the number of judicial districts and counties in each state by census regions. There are clear regional patterns in the geography of the judicial districts. Small states in New England (e.g., Maine, New Hampshire) tend to have just one judicial district covering the whole state. States in Pacific region (e.g., California) and Mid-Atlantic region (e.g., New Jersey, Pennsylvania) tend to have one judicial district covering one or two counties. The Southern and Midwestern states have judicial districts covering multiple (three or four) counties.

We also have data on a number of demographic characteristics at the court level. These have been aggregated from the county level, using data from the U.S. Census Bureau. We have this data for the censuses of 1980, 1990 and 2000.

| Reg | gion 1 : Northeast | | Re | gion 2 : Midwest | |
|---------------|--------------------|-----------|-----------------|-------------------|-----------|
| State | Number of | Number of | | Number of | Number of |
| State | Judicial Districts | Counties | State | Judicial District | Counties |
| Connecticut | 8 | 8 | Illinois | 22 | 102 |
| Maine | 1 | 16 | Indiana | 92 | 92 |
| Massachusetts | 62 | 14 | Iowa | 8 | 99 |
| New Hampshire | 1 | 10 | Kansas | 31 | 105 |
| New Jersey | 15 | 21 | Michigan | 57 | 83 |
| New York | 12 | 62 | Minnesota | 10 | 87 |
| Pennsylvania | 60 | 67 | Missouri | 45 | 115 |
| Rhode Island | 1 | 5 | Nebraska | 12 | 17 |
| Vermont | 1 | 14 | North Dakota | 7 | 53 |
| | | | Ohio | 88 | 88 |
| | | | South Dakota | 7 | 66 |
| | | | Wisconsin | 69 | 72 |
| Ι | Region 3: West | | Region 4: South | | |
| State | Number of | Number of | State | Number of | Number of |
| | Judicial Districts | Counties | | Judicial District | Counties |
| Alaska | 4 | 18 | Alabama | 41 | 67 |
| Arizona | 15 | 15 | Arkansas | 28 | 75 |
| California | 58 | 58 | Delaware | 1 | 3 |
| Colorado | 22 | 64 | Florida | 20 | 67 |
| Hawaii | 4 | 5 | Georgia | 49 | 159 |
| Idaho | 7 | 44 | Kentucky | 57 | 120 |
| Montana | 22 | 56 | Louisiana | 41 | 64 |
| Nevada | 9 | 17 | Maryland | 8 | 240 |
| New Mexico | 13 | 33 | Mississippi | 22 | 82 |
| Oregon | 27 | 36 | North Carolina | 47 | 100 |
| Utah | 8 | 29 | Oklahoma | 26 | 77 |
| Washington | 31 | 39 | South Carolina | 16 | 4 |
| Wyoming | 9 | 23 | Tennessee | 31 | 95 |
| | | | Texas | 424 | 254 |
| | | | Virginia | 31 | 134 |
| | | | West Virginia | 31 | 55 |

Table 1: Number of Judicial Districts and Counties by State (in 2004)

3.2 Judicial Selection Mechanisms

In this section, we describe the selection mechanisms by which judges are selected and retained for U.S. state courts. Currently, there are three major selection mechanisms: 1) In 'merit selection' system, judges are appointed by the governor. And, when the judges' term expires, they have to run for a non-competitive reelection process with approval (yes-or-no) vote for subsequent periods. 2) In 'partisan election' system, judges are selected by usual competitive elections. That is, judicial candidates seek nomination from political parties in primaries, and candidates nominated by parties compete in general elections. 3) In 'non-partisan election' system, multiple candidates compete without party identification on the ballot, and the top two vote-getters compete against each other in general elections (i.e., there are runoff elections). There are states that use a system that does not fall into one of the above three categories. For example, in Illinois, New Mexico, and Pennsylvania, judges have to run for partisan election for their initial term, and they run for reelection with voters' approval (yes-or-no) vote for subsequent terms. There are also three states in New England region, New Hampshire, Rhode Island, and Massachusetts, in which judges are selected by gubernatorial appointment and life-tenured.

Table 15 and 16 on pages 30 and 31 in the appendix show the full list of judicial selection mechanisms used by state trial courts.

4 Congruence

In this section, we introduce *Congruence*, the main variable we use to capture active media coverage on judges. Conceptually, congruence of a judicial district is a *weighted average reader share* that the judicial district has for newspapers sold in the district, where the weight is the *market share* of a newspaper in the district.

Consider a judicial district, d, with N judges. Let q_{mdj} be the number of stories newspaper m prints about each judge j, and let $q_{md} = (1/N) \sum_j q_{mdj}$ be the average number of stories that newspaper m prints per judge in the district. We relate this to the share of newspaper m's readers that lives in district d, ReaderShare_{md}. For simplicity, we assume a linear relationship,

$$q_{md} = \alpha_0 + \alpha_1 ReaderShare_{md}.$$
 (1)

Most judicial districts have more than one newspaper. Thus, we will often be interested in the average news coverage across newspapers. We use the sales-weighted average number of stories

about a judge in judicial district d. If there are M papers that sell in district d,

$$q_d = \sum_{m=1}^{M} MarketShare_{md} q_{md}, \qquad (2)$$

where $MarketShare_{md}$ is newspaper m's share of newspaper sales in district d. Note that we can write this as

$$q_d = \alpha_0 + \alpha_1 Congruence_d, \tag{3}$$

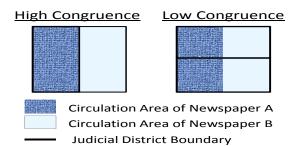
where

$$Congruence_d = \sum_{m=1}^{M} MarketShare_{md}ReaderShare_{md}.$$
(4)

We use variation in $Congruence_d$ to identify effects of newspaper coverage of judges on state courts. Note that since *Congruence* is defined using market shares, it is not dependent on the total newspaper penetration in the judicial district. This is important since total newspaper readership in an area is related to characteristics such as education and income levels.

Figure 1 illustrates cases of high congruence and low congruence. The left panel in the figure shows a case of perfect match between judicial districts and the circulation area of newspapers. The right panel in the figure shows a case of poor match. In the former case (perfect match), court cases in a judicial district are relevant to all of the readers of the newspaper sold in that district. Hence, newspapers will cover court cases often. In contrast, in the latter case (poor match), court cases in a judicial district are relevant to only a small portion of the readers of the newspaper sold in that district. Therefore, newspapers in low congruence areas cover court cases relatively infrequently.

Figure 1: Example - High Congruence and Low Congruence



To measure *Congruence*, we use county-level newspaper sales data. Each year, the Audit Bureau of Circulation (ABC) collects data on each newspaper's circulation in each county, for almost all U.S. newspapers. We have this data for 1982 and for the period 1991-2004. We complemented this with county-circulation data for non-ABC newspapers for 1991 and 2004, and interpolated values between those years. The non-ABC data were mainly for smaller papers.¹ In our data, the average number of newspaper copies sold in a year is 56 million. The average number of copies sold per household is 0.58, falling from around 0.70 in 1982 to 0.50 in 2004. For the years 1983-1990 when we do not have circulation data, we interpolate *Congruence*.

Figure 2 shows the overall distribution of congruence value, and Figure 3 shows the distribution of congruence in the nine most populous states. Figure 3 shows that most of large states have substantial degree of within state variation in congruence. In the main analysis, we will mainly exploit within state variation in congruence.

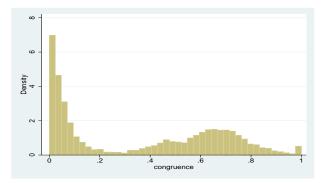


Figure 2: Distribution of Congruence (45 states)

5 Newspaper Coverage

In this section, we examine how the number of stories that a newspaper writes about a judge is related to the fraction of the newspaper's readers that live in the associated judicial district, the *ReaderShare*.

¹The non-ABC data was provided by SRDS. On average there are about 10,900 observations each year in the ABC data, and about 500 observations in the non-ABC data. There are about 3,000 counties in the U.S., so the average number of observations per county in each year is slightly less than 4.

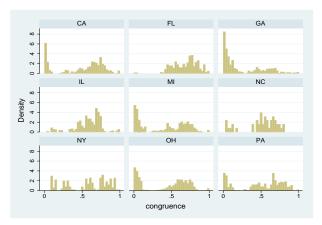


Figure 3: Distribution of Congruence in Large States

Our sample of judges consists of 9,828 judges who are state trial court judges in the U.S in 2004 and 2005. Our sample of newspapers consists of all 1,400 newspapers for which the articles published in 2004 and 2005 are searchable through NewsLibrary.com. For each judge in our sample, and each newspaper with positive sales in the state where the judge presides, we count the number of articles that appeared in 2004 and 2005. We use the search string {"judge N1" OR "judge N2"}, where N1 is the judge's full name including middle initial, and N2 is the judge's first and last name only. This yields the frequency of coverage for approximately 1 million judge-newspaper combinations, and constitutes our measure of q_{mdj} . Since our key variables vary at the judicial district level, we aggregate the frequency of coverage to the judicial district-newspaper level, to make q_{md} .

| Variable | Obs | Mean | Std. Dev |
|-----------------------------|-------|--------|----------|
| Article Share | 15929 | 0.024 | 0.116 |
| Articles per Judge | 18760 | 1.162 | 8.518 |
| Articles per Judge | 1224 | 9.047 | 18.597 |
| (circulation weighted) | | | |
| Reader Share | 18760 | 0.024 | 0.133 |
| Circulation in Court (1000) | 18760 | 1.442 | 11.232 |
| Total Circulation (1000) | 18760 | 63.423 | 94.292 |
| Congruence | 1224 | 0.227 | 0.317 |

Table 2: Summary Statistics of Press Coverage (All Sample)

Summary statistics of the basic data are shown in Table 2. On average, a newspaper in our sample writes 9 articles about each judge per year. Coverage varies considerably – the standard

deviation in coverage is 19 articles. When we include all the newspapers sold in a state, the average reader share is around 2.4 percent. When we include only newspapers sold in the district, the average reader share of a newspaper in a judicial district is 19 percent (not shown in Table 2). The average circulation in a district is 14,420.

A few other comments about coverage are worth noting. First, to estimate the degree to which coverage of judges focuses on especially violent crime, we ran searches that included the search string {AND (murder* OR rape*)}. In our sample, about 20% of the stories contain the added string. Thus, while murder and rape are over-represented in newspapers, relative to the share of criminal acts they represent, they do not dominate the coverage.

Second, to estimate the degree to which coverage of judges focuses on their sentencing behavior, we ran searches that included the search string {AND sentenc*}. About 33% of the stories contain this added string.

Third, inspection of a sample of 200 articles reveals that stories that are not about sentencing cover a wide range of topics, including: election campaigns, and candidates' backgrounds, qualifications, and endorsements; election results; judicial procedures and reforms; prison overcrowding and building new prisons and jails; crime rates; laws on the statute of limitations; appellate court rulings; other judicial decisions such as restraining orders; and articles describing ongoing court proceedings in particular high-profile cases.

Fourth, based on the stories in the *Local TV News Media Project*, there appears to be very little coverage of local judges on local television news.² Searching for news stories using the word "judge" yielded just 12 hits, none of which were about sentencing.³ Searching for the word "sentence" or "sentenced" or "sentencing" yielded 35 stories about criminal sentencing decisions or appeals, but none of these mentioned the name of the judge who passed the sentence.

We also analyze whether the amount of newspaper coverage about trial court judges depends on the selection mechanisms by which judges are selected. Table 3 shows the summary statistics of the amount of coverage by selection mechanisms. The difference in the amount of newspaper

²The Local TV News Media Project, at the University of Delaware, contains a database with over 10,600 individually digitized stories from over 600 broadcasts of 61 stations in 20 local television markets around the country that aired during the spring of 1998." See http://www.localtvnews.org/index.jsp for more information.

³One these stories was about election judges rather than trial or appellate judges, and one was about a judge's funeral, so only 10 stories were actually about judges' actions or decisions, or judicial elections. Of these, 3 were about a judge who was sentenced to jail for fraud, 2 were about whether a candidate met the residency requirements to run for a judicial office (the candidate was not a sitting judge), 1 was about a federal judge's decision to struck down Chicago's ban on tobacco and alcohol billboards, 1 was about a state supreme court's decision that a judge had not violated a state ethics law but had simply exercised his free speech, 1 was about a judge's decision not to quit a trial against tobacco companies, 1 was about the dismissal of a complaint against a judge for using a racial slur, and 1 was a retraction by the station of an error in an earlier broadcast.

| Variable | | Electe | d | Appointed | | |
|-----------------------------|-------|--------|----------|-----------|-------|----------|
| variable | Obs | Mean | Std. Dev | Obs | Mean | Std. Dev |
| Article Share | 12118 | 0.02 | 0.10 | 3811 | 0.04 | 0.15 |
| Articles per Judge | 14515 | 1.12 | 8.83 | 4245 | 1.32 | 7.33 |
| Articles per Judge | 916 | 8.682 | 18.69 | 308 | 10.13 | 18.31 |
| (circulation weighted) | | | | | | |
| Reader Share | 14515 | 0.02 | 0.12 | 4245 | 0.04 | 0.17 |
| Circulation in Court (1000) | 14515 | 1.26 | 10.66 | 4245 | 2.08 | 12.98 |
| Total Circulation (1000) | 14515 | 64.37 | 96.64 | 4245 | 60.18 | 85.70 |
| Congruence | 916 | 0.205 | 0.305 | 308 | 0.294 | 0.347 |

coverage about judges, between states with elected judges and those with appointed judges, is not statistically significant.

Table 3: Summary Statistics of Press Coverage by Selection Mechanism

We now show the relationship between the share of articles written about judges in a judicial district by a newspaper and the *ReaderShare* of the newspaper in the district. Figure 4 shows

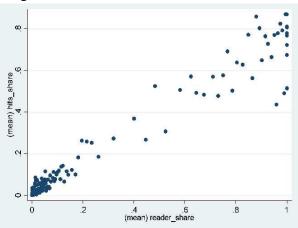


Figure 4: Reader Share and Share of Articles

(unit: judicial district - newspaper)

the basic relationship between *ReaderShare* of a judicial district for a newspaper and the share of articles of a judicial district for a newspaper.⁴

⁴To elaborate the definition of the article share, the variable in the y-axis of Figure 4, the denominator is the total number of articles written about state trial court judges by a newspaper, and the numerator is the number of articles written about state trial court judges in a particular judicial district by the given newspaper.

In the figure, we divide data points to 200 groups based on the value of *ReaderShare* (x-axis), and average out *ReaderShare* and the article share of a district within a group. (I.e., each point in Figure 4 represents 0.5% of the data points.) The figure shows a clear positive relationship between reader share and share of coverage of judicial districts.

Newspapers with low values of *ReaderShare* in a given judicial district (values near .01) print about one article per judge. This number increases to about ten articles per judge for newspapers with *ReaderShare* values in a district near one – i.e., newspapers whose readers nearly all live in the given judicial district.

| | Article | Article | Articles | Articles |
|---------------|-----------------|-----------------|-----------------|-----------------|
| | Share | Share | per Judge | per Judge |
| Share Readers | 0.761 | 0.766 | 21.296 | 22.508 |
| | $(0.004)^{***}$ | $(0.003)^{***}$ | $(0.441)^{***}$ | $(0.318)^{***}$ |
| Controls | No | Yes | No | Yes |
| Observations | 15929 | 14601 | 18760 | 17120 |
| R^2 | 0.742 | 0.808 | 0.112 | 0.246 |

Table 4: Regression of Frequency of Judge-related Coverage on Reader Share (All Sample)

Note: Unit of observation is newspaper by judicial district in 2004.

Standard errors in parentheses; *** significant at 1%.

Controls: State-FE, demographic characteristics, political orientation, and crime rates.

Table 4 investigates this relationship more closely, via a set of OLS regressions. In Columns 1 and 2, the dependent variable is the *share* of articles from a particular paper that is about judges on a particular court, q_{md}/q_m . In Column 1, the only independent variable is *ReaderShare_{md}*. Column 2 adds a number of controls: state-fixed effects, crime rates for 9 crime categories, population, per capita income, average education levels (share with 1-11 years, share with 12 years, and share with more than 12 years), share black, share urban, area in square miles, employment, turnout in presidential election, the Democratic vote share in the presidential election, and the share religious adherents.

The dependent variable in Columns 3 and 4 is q_{md} , the *number* of articles per judge in the court. Thus, these columns estimate equation (1) on page 7. An increase in *ReaderShare* from zero to one is associated with 21 more articles per judge.

In Table 5, we collapse the data at the judicial district level, and study the overall measure of the circulation-weighted average newspapers articles about judges in each court, q_d . These columns estimate equation (3) on page 8. An increase in *Congruence* from zero to one is associated with an

| | Articles per Judge | Articles per Judge |
|--------------|------------------------|------------------------|
| | (circulation weighted) | (circulation weighted) |
| Congruence | 24.379 | 25.369 |
| | $(1.527)^{***}$ | $(1.948)^{***}$ |
| Controls | No | Yes |
| Observations | 1224 | 1110 |
| R^2 | 0.173 | 0.285 |

Table 5: Regression of Frequency of Judge-related Coverage on Congruence

Note: Unit of observation is judicial district in 2004.

additional 24 more average newspaper articles per judge in the judicial district.

What do these numbers imply for the expected number of articles that an average person actually reads? A back-of-the-envelope calculation is illuminating. The question can be separated into two: who gets the newspaper, and who reads the article conditional on having the paper. To answer the first question, one can either look at household penetration rates, or readership numbers. Both are around 60 percent in our period of study.⁵ Since an increase in *Congruence* from zero to one is associated with an increase of 24 articles published in papers that reach about 60% of the households, the number of articles reaching an average household is 14 (24*0.6).

Regarding the second question, studies typically find that people read between a third and a fourth of all articles in a newspaper, and that around half of the articles that are read are read in depth (see e.g. Graber (1988), and Garcia and Stark (1991)). Thus, an increase in *Congruence* from zero to one would be associated with an average person reading around four more newspaper articles about their judge each year.

Summing up, an increase in *Congruence* from zero to one is associated with 24 more articles about the judge appearing in an average paper selling in his or her district. It is associated with about 14 more articles reaching an average household, and about 4 more articles being read. A one standard deviation increase in *Congruence* implies effects about a third as large, for example, about 1.3 more articles read.

We also analyze whether the relationship between reader share, congruence and the amount

⁵In our sample, the average number of newspapers sold per household is 0.58. The average total U.S. daily newspaper readership reported by the Newspaper Association of America is 60% of people aged above 18 for the period 1982 to 2004. Readership is measured by the share of survey respondents who say that they read a newspaper yesterday. See, the Newspaper Association of America, "Daily Newspaper Readership Trend - Total Adults (1964-1997)," 2004, and "Daily Newspaper Readership Trend - Total Adults (1998-2007)."

of coverage depends on judicial selection mechanisms, by running OLS regressions separately for different selection mechanisms. Comparison of Table 6 and Table 7 shows that judicial selection mechanisms do not significantly affect the relationship between reader share, congruence and the amount of coverage about judges.

| | Article | Article | Articles | Articles |
|------------------|-----------------|-----------------|-----------------|-----------------|
| | Share | Share | per Judge | per Judge |
| Share of Readers | 0.754 | 0.749 | 21.730 | 22.274 |
| | $(0.004)^{***}$ | $(0.004)^{***}$ | $(0.576)^{***}$ | $(0.366)^{***}$ |
| Controls | No | Yes | No | Yes |
| Observations | 12118 | 10883 | 14515 | 12973 |
| R^2 | 0.750 | 0.786 | 0.090 | 0.242 |

Table 6: Regression of Frequency of Judge-related Coverage on Reader Share (Elected Judges)

Note: Unit of observation is newspaper by judicial district in 2004. Standard errors in parentheses; *** significant at 1%.

Table 7: Regression of Frequency of Judge-related Coverage on Reader Share (Appointed Judges)

| | Article | Article | Articles | Articles |
|------------------|-----------------|-----------------|-----------------|-----------------|
| | Share | Share | per Judge | per Judge |
| Share of Readers | 0.771 | 0.798 | 20.586 | 23.019 |
| | $(0.008)^{***}$ | $(0.006)^{***}$ | $(0.599)^{***}$ | $(0.647)^{***}$ |
| Controls | No | Yes | No | Yes |
| Observations | 3811 | 3718 | 4245 | 4147 |
| R^2 | 0.728 | 0.847 | 0.219 | 0.257 |

Note: Unit of observation is newspaper by judicial district in 2004.

Standard errors in parentheses; *** significant at 1%.

Local Penal Attitudes 6

The primary purpose of this study is to investigate whether active press coverage makes judges more accountable to local penal preferences. To measure voters' penal preferences, we use the share of voters who vote for harsher crime punishment on various ballot propositions. Specifically, we use all available statewide ballot propositions that deal mainly with the punishment of criminals, the rights of the accused, and victim's rights. These propositions are listed in Table 17, 18, 19 on pages 32-34 in the appendix. Note that in virtually all cases a majority of voters voted for an increase in harshness towards criminals or the accused, or in favor of victim's rights. On average, more than 65% of voters took the harsher position. This is consistent with the widespread view that most Americans believe the criminal justice system is too lenient.

We collected county-level voting data from states' election websites and/or election officials. We code all propositions so that higher vote-shares represent greater support for increased harshness towards criminals or the accused. For states with more than one proposition, we average the vote shares across the available propositions. We then de-mean the vote shares so that in each state the mean score is zero. We call the resulting variable *hvs*, for "harshness vote share."

To validate our measure, we explore how it correlates with responses to survey questions of penal attitudes in the National Annenberg Election Survey (NAES) 2000. The NAES 2000 interviewed 79,458 US residents living in 2,898 counties for 14 months during the 2000 US presidential campaign and after the election. The survey includes the item: "*The number of criminals who are not punished enough – is this an extremely serious problem, a serious problem, not too serious or not a problem at all?*" We scale the answers to this question from one to four, where one is "not a problem" and four is "extremely serious." The distribution of answers is as follows: "extremely serious" (34%), "serious" (47%), "not too serious" (14%), and "not a problem" (3%) (Table 8). This again suggests that most Americans would prefer a harsher criminal justice system.

| | Freq. | Percent | Cum. | | | | |
|-------------------|--------|---------|--------|--|--|--|--|
| extremely serious | 26,604 | 33.89 | 33.89 | | | | |
| serious | 36,755 | 46.82 | 80.71 | | | | |
| not too serious | 10,661 | 13.58 | 94.29 | | | | |
| not a problem | 2,106 | 2.68 | 96.97 | | | | |
| don't know | 1,953 | 2.49 | 99.46 | | | | |
| no answer | 425 | 0.54 | 100.00 | | | | |
| Total | 78,504 | 100.00 | | | | | |

Table 8: NAES Question on Penal Attitudes

Table 9 shows the results from the regression of the penal attitudes expressed in the NAES survey responses on our measure of penal attitudes expressed in voting on ballot measures. The dependent variable is the survey response to the question whether underpunished criminals is a problem. The main independent variable is the share of voters who voted for harsher punishments on ballot propositions. Table 9 shows the OLS regression results with three specifications: one

| | Ι | II | III |
|--------------------------|-----------------|-----------------|-----------------|
| "Harsh" vote share (hvs) | 0.062 | 0.638 | 0.409 |
| | (0.091) | $(0.174)^{***}$ | (0.131)*** |
| Democratic vote share | -0.579 | -0.345 | -0.268 |
| | $(0.100)^{***}$ | $(0.085)^{***}$ | $(0.097)^{***}$ |
| demographic controls | no | no | yes |
| state FE | no | yes | yes |
| Observations | 25558 | 25558 | 18886 |
| R^2 | 0.011 | 0.019 | 0.062 |

Table 9: OLS regression results based on NAES survey 2000. Dependent Variable: Under-punishing criminals is a problem.

Standard errors, clustered by county in parenthesis.

without state fixed effects (FE) and demographic control variables (column I), another with state FE but without demographic control variables (column II), and the other with both state FE and demographic control variables (column III). In all three specifications, we control for Democratic vote share of the two-party vote in the presidential election. Demographic control variables include a number of respondent controls (race, party id dummy variables on a seven-point scale, ideology dummy variables on a five-point scale, and dummy variables for how frequently the respondent attend religious services on a five-point scale). It also includes county-level controls: crime rates for murder and rape, population, per capita income, average education levels (share with 1-11 years, share with 12 years, and share with more than 12 years), share black, share females, share urban, share younger than 20, share older than 65, employment, and the share religious adherents.

The lack of statistical significance of our measure in column I reflects that questions on ballot measures are state-specific. The results with state-FE show that there is a statistically significant correlation between voters' penal attitudes in survey responses and our measure from ballot propositions. The correlation is still significant after inclusion of a large set of demographic control variables.

7 Sentencing

We use sentencing data from the National Judicial Reporting Program (NJRP). This program collects felony sentencing data from a national sample of state courts. The information collected includes: age, race and gender of offenders; dates of arrest, conviction and sentencing; offense category and penal codes applied; mode of conviction and type of sentence imposed. Data has been collected every 2 years since 1986 by the Census Bureau. Since the offense classifications were changed in 1990, we only use observations starting in that year. The total number of observations is 2.65 million, of which 2.5 million are after 1990. The number of observations is around 55,000 in 1986, around 100,000 per year for the period 1988-1994, and more than 400,000 per year for the period 1996-2004. Each survey year, approximately 300 counties are sampled, except in 1986 were 100 counties were sampled. The counties are selected through stratified sampling. Within each court, cases are randomly sampled within crime types.

In the main analysis, we focus on the three most serious offense types: homicides, sexual assaults and robberies, because these are most likely to attract media attention. These types of crimes also give the longest sentences. (We will compare results from these offense types with results from other offense types.) Table 10 lists the 12 offense categories used in the NJRP data, the number of sentences in each category.

| Most serious offense: | 1 | | |
|-----------------------|-----------|---------|--------|
| | | | a |
| 12 categories | Freq. | Percent | Cum. |
| Violent crimes | | | |
| murder | 36,122 | 1.44 | 1.44 |
| sexual assault | 80,863 | 3.21 | 4.65 |
| robbery | 132,786 | 5.28 | 9.93 |
| aggravated assault | 213,818 | 8.50 | 18.43 |
| other violent | 39,657 | 1.58 | 20.01 |
| Property crimes | | | |
| burglary | 224,705 | 8.93 | 28.94 |
| larceny | 285,226 | 11.34 | 40.28 |
| fraud | 188,967 | 7.51 | 47.79 |
| Drug crimes | | | |
| drug possession | 350,688 | 13.94 | 61.73 |
| drug trafficking | 527,998 | 20.99 | 82.72 |
| Weapons and other | | | |
| weapon offenses | 113,018 | 4.49 | 87.21 |
| other offenses | 321,627 | 12.79 | 100.00 |
| Total | 2,515,475 | 100.00 | |

Table 10: Most Serious Offenses - 12 Categories in NJRP Data

Our main dependent variable is a measure of the harshness of sentencing, relative to other sentences in the same state, year and penal code citation. (Given that a felon has been convicted

under a certain penal code citation, it is typically under the discretion of the judge to set the sentence. Our measure is supposed to capture the discretionary part of sentencing by judges.) To construct this measure, we first generate a variable, penal code, that takes the same value for all crimes in each state in each year that has the same penal code citation for the 1st, 2nd, and 3rd most serious offense. We then identify the minimum and maximum sentence given for that penal code. The variable *harshness* is defined as

$$harshness = \frac{sentence - minimum}{maximum - minimum}$$

Our main independent variable is *HighCongruence*, a dummy variable for whether congruence is higher than the sample median.

If judges are responsive to local penal attitudes, then we expect sentences to be harsher in areas where more support the harsh side in ballot propositions on crime. If media coverage make judges more responsive, then we would expect an even stronger relationship between these variables where the press covers the judges more. To test this, we regress harshness on our measure of penal attitudes, *HighCongruence*, and the interaction between *HighCongruence* and the penal attitudes. We demean *hvs* before computing the interaction variables, so that the main effects measure the effects at the sample means.

7.1 Basic results

Table 11 shows regression results from three specifications: one without state fixed effects (FE) and control variables (column I), another with state FE but without control variables (column II), and the other with both state FE and control variables (column III). In column III, we include an extensive set of controls. Individual-level controls include dummy variables for male, black, Hispanic defendants, age, age squared. Court-level controls include the population (logged), income (logged), share religious adherents, area, share females, share younger than 20, share older than 65, share black, share Hispanics, share urban, education (share with 1-11 years, share with 12 years, and share with more than 12 years), turnout in presidential election, number of aggravated assaults, property crimes, burglaries, larceny-thefts, motor vehicle thefts, violent crimes, murders and non-negligible manslaughters, forcible rapes and robberies known to police.

After including state-fixed effects, sentences are harsher in judicial districts where people have harsher penal attitudes (captured by *hvs*), and even more so where we expect more press coverage (captured by interaction of *HighCongruence* and *hvs*). These effects are not very sensitive to

| Dependent Variable: Harshness | Ι | II | III |
|-------------------------------|-----------------|-----------------|-----------------|
| Harsh vote share (hvs) | -0.041 | 0.337 | 0.332 |
| | (0.056) | $(0.070)^{***}$ | $(0.121)^{***}$ |
| HighCongruence | -0.035 | -0.032 | -0.015 |
| | $(0.013)^{***}$ | $(0.008)^{***}$ | (0.010) |
| HighCongruence*hvs | | 0.449 | 0.331 |
| | | $(0.089)^{***}$ | $(0.092)^{***}$ |
| Newspaper penetration | 0.132 | 0.150 | 0.007 |
| | $(0.044)^{***}$ | $(0.038)^{***}$ | (0.039) |
| state-year FE | no | yes | yes |
| controls | no | no | yes |
| Observations | 75008 | 75008 | 68587 |
| R^2 | 0.003 | 0.032 | 0.094 |

Table 11: The Effect of congruence and penal attitudes on sentencing

Standard errors in parentheses; *** significant at 1%;

the inclusion of the control variables. Interpreting the results in terms of normalized harshness of sentencing, increasing the district-level vote share for harsh punishment from 0 to 1 increases the normalized harshness of sentencing ("*harshness*") by 33.2% of overall discretion in low congruence area (*HighCongruence* = 0). In high congruence area (*HighCongruence* = 1), i.e., in the presence of active press coverage, an increase in vote share from 0 to 1 is associated with an increase in normalized harshness of sentencing by 66.3% (=33.2%+33.1%) of overall discretion. Therefore, we conclude that the active press coverage substantially magnifies the influence of voter preferences on harshness of sentencing (by about two-folds).

In addition, we find that there is *no influence* of press coverage *independently of voter preferences*. In theory, one can conceive a situation in which judges want to avoid press coverage *per se*. For example, a critical press coverage of judges may affect their reputation among their peers and negatively affect their prospect of promotion. If newspapers cover a particular kind of sentencing decisions (e.g., lenient sentencing) more often and judges want to avoid press coverage *per se*, then judges would avoid making decisions that are likely to be covered, independent of voter preference. Such effect, if any, would be captured in the above specification by *HighCongruence*. Our result shows that there is no such effect.

Our finding that press coverage magnifies the influence of voter preferences on sentencing leads to the following question: Would press coverage influence harshness of sentencing only in the political environments where voters can elect judges directly? This is the question that we

answer in the next section.

7.2 Elected vs. Appointed Judges

The variation in mechanisms by which state trial court judges are selected, introduced in Section 3.2, provides us with a unique opportunity to understand the interaction between the "accountability" of public officials and the amount of information that voters acquire through media.

How the selection mechanisms of judges will interact with media influence on courts is not an obvious issue. To be precise, the issue that we investigate in this section can be divided to two different but tightly interlinked questions. One is whether the influence of voter preferences on court decisions are different under different selection mechanisms. The other is how media influence affects the answer to the former.

Theoretically, there are two main reasons why judicial selection mechanisms matter. The first reason is the possibility that the types of judges selected by the governor can be different from the types of judges selected through direct elections. On one hand, even when judges are not directly elected by the voters, the public officials (typically the governor) who appoint them are elected by the voters. If unpopular decisions by judges affect reelection prospect of the governor who appointed them, the governor will want to appoint judges who are sensitive to public opinions. But, on the other hand, to the extent that judicial appointment is a relatively minor issue in gubernatorial elections, governors have the freedom to choose judges whose views are more in line with their (governors') own views as opposed to voters' preferences. For example, Besley and Coate (2003) propose a theoretical model of 'issue unbundling' through direct election of regulators, and they provide evidence that selection mechanisms matter in the case of public utility regulators, using panel data on electricity prices.⁶ Lim (2008) explicitly estimates the preference distribution of judges selected under the two selection mechanisms, and shows that there are significant differences in the intrinsic preferences of appointed and elected judges. In brief, different selection mechanisms may yield judges with different preferences (i.e., "selection effect"), and this effect depends on how salient judicial issues are in gubernatorial elections.

If there is more active media coverage about courts in general, voters may acquire better information about judicial candidates. This would result in selecting judges whose preferences are more in line with voters under direct elections. That is, press coverage may strengthen the selection effect by providing voters with more information about courts.

⁶The possibility that different selection mechanisms can result in different policy outcomes was investigated in various contexts. For details, see the literature cited in Besley and Coate (2003).

Secondly, appointed and elected judges face different retention processes. While appointed judges typically face a yes-or-no vote without challengers, elected judges face reelection processes that can potentially be competitive. While the presence of challengers in the retention process of elected judges may encourage voters to acquire information about judges' behavior, the absence of potential challengers in retention process of appointed judges will discourage voters from acquiring information about incumbent judges. This may result in a substantial difference in the degree of reelection concerns that appointed and elected judges face.

Hall (2001) shows that there is a striking difference in the reelection rates of incumbents judges under different reelection processes (yes-or-no vote *vs.* competitive elections), using a nationwide data set on state supreme court judges. In addition, Lim (2008) estimates reelection probability as a function of judges' criminal sentencing decisions, using their potential outside payoffs as an instrument variable for their decisions, and provides an evidence that elected judges face strong reelection concerns. In brief, even for judges with the same preferences, the differences in reelection process results in a substantial variation in their sentencing decisions (*"reelection effect"*).

Active media coverage may strengthen elected judges' reelection concerns by providing more information that potential challengers can use to attack incumbent judges.

In Table 12, we run regressions separately for elected judges and appointed judges, with cases on three most severe crimes (homicides, sexual assaults, and robberies). The specification of regressions in column I,II, and III in each panel is identical to that of Table 11. Our results have several notable features. First, when we run regressions only for elected judges (left panel), the influence of voter preferences on sentencing is more pronounced than for the whole sample. In contrast, for appointed judges alone (right panel), the magnitude of voter influence on court decisions is much smaller, and it is not statistically significant.

Second, for elected judges, the presence of active press coverage substantially magnifies the influence of voter preferences on sentencing decisions (by about two-folds). In contrast, for appointed judges, there does not exist any media influence.

In addition, there is no media influence on judges' decisions that are independent of voters' preferences, regardless of whether they are elected appointed.

In brief, press coverage magnifies the influence of voter preferences on judges' decisions only in an environment where voter can directly participate in selection and retention of judges.

| | Elected | | | Appointed | | |
|-------------------------------|-----------------|-----------------|----------------|-----------------|-------------|-------------|
| Dependent Variable: Harshness | Ι | II | III | Ι | II | III |
| Harsh vote share (hvs) | 0.129 | 0.418 | 0.403 | -0.629 | 0.089 | 0.205 |
| | $(0.065)^{**}$ | $(0.083)^{***}$ | $(0.168)^{**}$ | $(0.081)^{***}$ | (0.121) | (0.169) |
| HighCongruence | -0.049 | -0.039 | -0.022 | 0.016 | 0.020 | -0.028 |
| | $(0.014)^{***}$ | $(0.011)^{***}$ | $(0.012)^*$ | (0.028) | $(0.010)^*$ | $(0.015)^*$ |
| HighCongruence*hvs | | 0.600 | 0.360 | | -0.120 | -0.026 |
| | | $(0.109)^{***}$ | (0.135)*** | | (0.113) | (0.139) |
| state-year FE | no | yes | yes | no | yes | yes |
| controls | no | no | yes | no | no | yes |
| Observations | 62660 | 62660 | 56522 | 12348 | 12348 | 12065 |
| R^2 | 0.003 | 0.032 | 0.094 | 0.034 | 0.117 | 0.182 |

Table 12: The Effect of Congruence and Penal Preferences by Selection Systems

Standard errors, clustered at the district-level, in parentheses;

*** significant at 1%; ** significant at 5%; * significant at 10%.

7.3 Results by Offense Type and Severity

So far, we have focused on the three most serious crimes (homicides, sexual assaults, and robberies) because they are the most likely to get the press coverage. In this section, we compare the influence of press coverage by category of crimes: violent crimes, property crimes, drug crimes, and weapons and other. The results are shown in Table 13 on page 24. There are several notable features in the results. First, the influence of voter preferences on sentencing decisions is statistically significant in all categories except for "weapons and other". However, media influence through magnification of voter preferences, captured by the interaction between penal attitudes (*hvs*) and *HighCongruence*, is substantial in magnitude and statistically significant at 1%-level only for violent crimes. The magnitude is only half as large for property crimes and is statistically significant only at 10%-level. For drug crime, the magnitude of the effect of congruence is only a quarter of the effect for violent crimes, and it is not statistically significant even at 10% level.

We also investigate the effect by severity level of offenses in Table 14. The results by severity level shows a similar pattern. The effect of congruence is substantial and statistically significant at 5% and 1% level only for class 1-3 offenses out of 12 offense severity levels in NJRP.

| | | Violent | | Property | | | |
|---|---------------------|----------------------------|--------------------------|------------------|----------------------------|--------------------------|--|
| Dependent Variable: Harsh | Ι | II | III | Ι | II | III | |
| "Harsh" vote share (hvs) | 0.007 | 0.258 | 0.259 | 0.154 | 0.380 | 0.260 | |
| | (0.051) | (0.063)*** | (0.116)** | (0.053)*** | (0.071)*** | (0.091)*** | |
| HighCongruence | -0.037 | -0.037 | -0.020 | -0.017 | -0.036 | -0.022 | |
| | (0.010)*** | (0.008)*** | (0.010)** | (0.011) | (0.007)*** | (0.009)** | |
| HighCongruence*hvs | | 0.345 | 0.287 | | 0.380 | 0.146 | |
| | | (0.088)*** | (0.101)*** | | (0.093)*** | (0.086)* | |
| Newspaper penetration | 0.105 | 0.127 | 0.005 | 0.065 | 0.133 | 0.013 | |
| | (0.038)*** | (0.036)*** | (0.037) | (0.035)* | (0.031)*** | (0.025) | |
| State-by-year FE | no | yes | yes | no | yes | yes | |
| Controls | no | no | yes | no | no | yes | |
| Observations | 170837 | 170837 | 154084 | 269425 | 269425 | 245538 | |
| R^2 | 0.005 | 0.025 | 0.069 | 0.005 | 0.032 | 0.058 | |
| | Drug | | | W | Weapons and other | | |
| Dependent Variable: Harsh | Ι | II | III | Ι | II | III | |
| "Harsh" vote share (hvs) | 0.145 | 0.230 | 0.235 | 0.042 | 0.279 | 0.157 | |
| | (0.054)*** | (0.060)*** | (0.113)** | (0.056) | (0.064)*** | (0.119) | |
| HighCongruence | -0.001 | -0.020 | -0.002 | 0.013 | -0.028 | -0.023 | |
| | (0.011) | (0.008)** | (0.010) | (0.011) | (0.007)*** | (0.009)** | |
| HighCongruence*hvs | | 0.417 | 0.077 | | 0.201 | 0.058 | |
| | | | | | | | |
| | | (0.082)*** | (0.100) | | (0.084)** | (0.094) | |
| Newspaper penetration | 0.148 | (0.082)*** 0.109 | (0.100) -0.013 | 0.057 | (0.084)** 0.123 | (0.094) 0.050 | |
| Newspaper penetration | 0.148 (0.047)*** | | . , | 0.057 (0.043) | | . , | |
| Newspaper penetration State-by-year FE | | 0.109 | -0.013 | | 0.123 | 0.050 | |
| | (0.047)*** | 0.109 (0.032)*** | -0.013 (0.028) | (0.043) | 0.123 (0.030)*** | 0.050 (0.030)* | |
| State-by-year FE | (0.047)*** no | 0.109 (0.032)*** yes | -0.013 (0.028) yes | (0.043) no | 0.123 (0.030)*** yes | 0.050 (0.030)* yes | |

Table 13: The Effect of Congruence and Penal Preferences by Offense Category

Standard errors, clustered at the district-level, in parentheses;

*** significant at 1%; ** significant at 5%; * significant at 10%.

| | | Class 1-3 | | | Class 4-5 | |
|---|--|---|---|--|---|--|
| Dependent Variable: Harsh | Ι | II | III | Ι | II | III |
| "Harsh" vote share (hvs) | -0.041 | 0.337 | 0.332 | 0.093 | 0.170 | 0.203 |
| | (0.056) | (0.070)*** | (0.121)*** | (0.061) | (0.073)** | (0.136) |
| HighCongruence | -0.035 | -0.032 | -0.015 | -0.041 | -0.053 | -0.042 |
| | (0.013)*** | (0.008)*** | (0.010) | (0.010)*** | (0.009)*** | (0.013)*** |
| HighCongruence*hvs | | 0.449 | 0.331 | | 0.208 | 0.221 |
| | | (0.089)*** | (0.092)*** | | (0.114)* | (0.145) |
| Newspaper penetration | 0.132 | 0.150 | 0.007 | 0.044 | 0.120 | -0.003 |
| | (0.044)*** | (0.038)*** | (0.039) | (0.041) | (0.041)*** | (0.044) |
| State-by-year FE | no | yes | yes | no | yes | yes |
| Controls | no | no | yes | no | no | yes |
| Observations | 172716 | 172716 | 136696 | 180720 | 180720 | 141106 |
| R^2 | 0.010 | 0.062 | 0.114 | 0.006 | 0.052 | 0.074 |
| | | Class 6-8 | | | Class 9-11 | |
| Dependent Variable: Harsh | Ι | II | III | Ι | II | III |
| ((TT 1)) (1 (1) | | | | | | |
| "Harsh" vote share (hvs) | 0.154 | 0.380 | 0.260 | 0.132 | 0.236 | 0.230 |
| "Harsh" vote share (hvs) | 0.154 (0.053)*** | 0.380 (0.071)*** | 0.260 (0.091)*** | 0.132 (0.054)** | 0.236 (0.059)*** | 0.230 (0.116)** |
| Harsh [®] vote share (hvs) HighCongruence | | | | | | |
| | (0.053)*** | (0.071)*** | (0.091)*** | (0.054)** | (0.059)*** | (0.116)** |
| | (0.053)*** -0.017 | (0.071)*** -0.036 | (0.091)*** -0.022 | (0.054)** 0.001 | (0.059)*** -0.021 | (0.116)** -0.006 |
| HighCongruence | (0.053)*** -0.017 | (0.071)*** -0.036 (0.007)*** | (0.091)*** -0.022 (0.009)** | (0.054)** 0.001 | (0.059)*** -0.021 (0.008)*** | (0.116)** -0.006 (0.009) |
| HighCongruence | (0.053)*** -0.017 | (0.071)*** -0.036 (0.007)*** 0.380 | (0.091)*** -0.022 (0.009)** 0.146 | (0.054)** 0.001 | (0.059)*** -0.021 (0.008)*** 0.392 | (0.116)** -0.006 (0.009) 0.074 |
| HighCongruence HighCongruence*hvs | (0.053)*** -0.017 (0.011) | (0.071)*** -0.036 (0.007)*** 0.380 (0.093)*** | (0.091)*** -0.022 (0.009)** 0.146 (0.086)* | (0.054)** 0.001 (0.010) | (0.059)*** -0.021 (0.008)*** 0.392 (0.081)*** | (0.116)** -0.006 (0.009) 0.074 (0.102) |
| HighCongruence HighCongruence*hvs | (0.053)*** -0.017 (0.011) 0.065 | (0.071)*** -0.036 (0.007)*** 0.380 (0.093)*** 0.133 | (0.091)*** -0.022 (0.009)** 0.146 (0.086)* 0.013 | (0.054)** 0.001 (0.010) 0.142 | (0.059)*** -0.021 (0.008)*** 0.392 (0.081)*** 0.105 | (0.116)** -0.006 (0.009) 0.074 (0.102) -0.005 |
| HighCongruence HighCongruence*hvs Newspaper penetration | (0.053)*** -0.017 (0.011) 0.065 (0.035)* | (0.071)*** -0.036 (0.007)*** 0.380 (0.093)*** 0.133 (0.031)*** | (0.091)*** -0.022 (0.009)** 0.146 (0.086)* 0.013 (0.025) | (0.054)** 0.001 (0.010) 0.142 (0.046)*** | (0.059)*** -0.021 (0.008)*** 0.392 (0.081)*** 0.105 (0.031)*** | (0.116)** -0.006 (0.009) 0.074 (0.102) -0.005 (0.027) |
| HighCongruence HighCongruence*hvs Newspaper penetration State-by-year FE | (0.053)*** -0.017 (0.011) 0.065 (0.035)* no | (0.071)*** -0.036 (0.007)*** 0.380 (0.093)*** 0.133 (0.031)*** yes | (0.091)*** -0.022 (0.009)** 0.146 (0.086)* 0.013 (0.025) yes | (0.054)** 0.001 (0.010) 0.142 (0.046)*** no | (0.059)*** -0.021 (0.008)*** 0.392 (0.081)*** 0.105 (0.031)*** yes | (0.116)** -0.006 (0.009) 0.074 (0.102) -0.005 (0.027) yes |

Table 14: The Effect of Congruence and Penal Preferences by Severity Level

Standard errors, clustered at the district-level, in parentheses;

*** significant at 1%; ** significant at 5%; * significant at 10%.

8 Conclusion

Judiciary is often regarded as the branch of the government that is the most insulated from public opinions. In this research, we investigated the amount of press coverage about U.S. state trial court judges, its influence on criminal sentencing, and the interaction between press coverage and the selection mechanisms of judges. Our main results can be summarized as follows: 1) There is a substantial amount of press coverage about state trial court judges, 2) presence of active press coverage magnifies the influence of voters' penal preferences on criminal sentencing decisions, 3) such effect is statistically significant only for severe violent crimes, 4) such effect exists only for elected judges. The presence of salient effects documented above shows that public opinions do influence court decisions to a substantial degree, and that the main mechanism is the interaction of electoral process and voter information on court decisions affected by the presence of active media.

Much remains to be done to uncover details of the mechanisms by which the press coverage affects court decisions. For example, in this paper, we only documented the *amount* of press coverage (number of articles mentioning judges' name). If we can acquire information on the timing of coverage (e.g., electoral cycles) and what type of court decision gets covered, it would further our understanding of the media influence. In addition, an analysis of media influence on the election of judges will help us better understand the channels through which media influence interacts with selection mechanisms of judges. These issues will be addressed in our future research.

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Appendix

In Table 15 and 16, we document the details of the judicial selection mechanisms. Further details can be found on a webpage of the American Judicature Society, http://www.judicialselection.us/. And, in Table 17-19, we list the ballot propositions used to measure penal preferences.

| State | Name of Trial Court | Initial Selection | Reelection |
|-------------|---------------------|------------------------------|------------------------------|
| Alabama | Circuit Court | Partisan Election | Partisan Election |
| Alaska | Superior Court | Gubernatorial Appointment | Retention Election |
| Arizona | Superior Court | (Variation across counties) | (Variation across counties) |
| | | Gubernatorial Appointment | Retention Election |
| | | Nonpartisan Election | Nonpartisan Election |
| Arkansas | Circuit Court | Nonpartisan Election | Nonpartisan Election |
| California | Superior Court | Nonpartisan Election | Nonpartisan Election |
| Colorado | District Court | Gubernatorial Appointment | Retention Election |
| Connecticut | Superior Court | Gubernatorial Appointment | Reappointment |
| Delaware | Superior Court | Gubernatorial Appointment | Reappointment |
| Florida | Circuit Court | Nonpartisan Election | Nonpartisan Election |
| Georgia | Superior Court | Nonpartisan Election | Nonpartisan Election |
| Hawaii | Circuit Court | Gubernatorial Appointment | Reappointment |
| Idaho | District Court | Nonpartisan Election | Nonpartisan Election |
| Illinois | Circuit Court | Partisan Election | Retention Election |
| Indiana | Superior Court | Partisan Election | Partisan Election |
| Iowa | District Court | Gubernatorial Appointment | Retention Election |
| Kansas | District Court | (Variation across districts) | (Variation across districts) |
| | | Gubernatorial Appointment | Retention Election |
| | | Partisan Election | Partisan Election |
| Kentucky | Circuit Court | Nonpartisan Election | Nonpartisan Election |
| Louisiana | District Court | Partisan Election | Partisan Election |
| Maine | Superior Court | Gubernatorial Appointment | Reappointment |
| Maryland | Circuit Court | Gubernatorial Appointment | Reappointment |

Table 15: Judicial Selection Mechanisms for State Trial Courts

| State | Name of Trial Court | Initial Selection | Reelection |
|----------------|-----------------------|-----------------------------|-----------------------------|
| Massachusetts | Superior Court | Gubernatorial Appointment | Life-tenure |
| Michigan | Circuit Court | Nonpartisan Election | Nonpartisan Election |
| Minnesota | District Court | Nonpartisan Election | Nonpartisan Election |
| Mississippi | Circuit Court | Nonpartisan Election | Nonpartisan Election |
| Missouri | Circuit Court | (Variation across Counties) | (Variation across Counties) |
| | | Gubernatorial Appointment | Retention Election |
| | | Partisan Election | Partisan Election |
| Montana | District Court | Nonpartisan Election | Nonpartisan Election |
| Nebraska | District Court | Gubernatorial Appointment | Retention Election |
| Nevada | District Court | Gubernatorial Appointment | Retention Election |
| New Hampshire | Superior Court | Gubernatorial Appointment | Life-tenure |
| New Jersey | Superior Court | Gubernatorial Appointment | Gubernatorial Appointment |
| New Mexico | District Court | Partisan Election | Retention Election |
| New York | Supreme Court | Partisan Election | Partisan Election |
| North Carolina | Superior Court | Nonpartisan Election | Nonpartisan Election |
| North Dakota | District Court | Nonpartisan Election | Nonpartisan Election |
| Ohio | Court of Common Pleas | Partisan Election | Partisan Election |
| Oklahoma | District Court | Nonpartisan Election | Nonpartisan Election |
| Oregon | Circuit Court | Nonpartisan Election | Nonpartisan Election |
| Pennsylvania | Court of Common Pleas | Partisan Election | Retention Election |
| Rhode Island | Superior Court | Gubernatorial Appointment | Life-tenure |
| South Carolina | Circuit Court | Legislative Appointment | Legislative Appointment |
| South Dakota | Circuit Court | Nonpartisan Election | Nonpartisan Election |
| Tennessee | Circuit Court | Partisan Election | Partisan Election |
| Texas | District Court | Partisan Election | Partisan Election |
| Utah | District Court | Gubernatorial Appointment | Retention Election |
| Vermont | Superior Court | Gubernatorial Appointment | Legislative Appointment |
| Virginia | Circuit Court | Legislative Appointment | Legislative Appointment |
| Washington | Superior Court | Nonpartisan Election | Nonpartisan Election |
| West Virginia | Circuit Court | Partisan Election | Partisan Election |
| Wisconsin | Circuit Court | Nonpartisan Election | Nonpartisan Election |
| Wyoming | District Court | Gubernatorial Appointment | Retention Election |

| State | Year | Prop No. | Percent Yes | Description |
|-------|------|-------------------|-------------|---|
| AL | 1996 | Amendment 3 | 70 | Removing the Prohibition on Guilty Pleas within 15 Days of Arrest in Non-Capital Felony Cases |
| AZ | 1998 | Proposition 301 | 48 | Relating To Probation Eligibility For Drug Possession Or Use |
| AZ | 2002 | Proposition 103 | 80 | Bailable Offenses; Prohibitions |
| AZ | 2002 | Proposition 302 | 69 | Probation For Drug Crimes |
| AZ | 2006 | Proposition 100 | 77 | Bailable Offenses |
| AZ | 2006 | Proposition 301 | 58 | Probation for Methamphetamine Offenses |
| CA | 2000 | Proposition 18 | 72 | Murder; Special Circumstances; Leg Initiative Amendment |
| CA | 2000 | Proposition 21 | 62 | Juvenile Crime |
| CO | 1992 | Referendum A | 80 | Rights of Crime Victims |
| CO | 1994 | Referendum C | 77 | Post-Conviction Bail |
| FL | 1998 | Amendment 2 | 72 | Preservation of Death Penalty; |
| | | | | US Supreme Court Interpretation of Cruel And Unusual Punishment |
| HI | 2002 | Question 3 | 57 | Initiation of Felony Prosecutions By Written Information |
| HI | 2004 | Amendment 1 | 65 | Sexual Assault Crimes |
| HI | 2004 | Amendment 2 | 71 | Public Access To Registration Information of Sex Offenders |
| HI | 2004 | Amendment 3 | 53 | Rights of Alleged Crime Victims |
| HI | 2004 | Amendment 4 | 56 | Initiation of Criminal Charges |
| HI | 2006 | Amendment 4 | 69 | Sexual Assault Crimes Against Minors |
| IA | 1998 | Amendment 2 | 63 | Eliminate Limitation of Fines For Offenses That May Be |
| | | | | Summarily Tried Without Indictment |
| ID | 1994 | H.J.R 16 | 80 | Provide for Rights of Crime Victims |
| IN | 1996 | Public Question 1 | 89 | Victims' Rights |
| IN | 2000 | Public Question 1 | 65 | Criminal Appeals Process |
| LA | 1998 | Amendment 4 | 69 | Provides for Rights of the Victim of a Crime |
| LA | 1998 | Amendment 6 | 68 | Make It Easier For Judges To Deny Bail |
| LA | 1998 | Amendment 14 | 62 | Require a Unanimous Verdict in Criminal Trials That Use Six-Member Jury |

 Table 17: Ballot Propositions Used to Measure Penal Preferences

| State | Year | Prop No. | Percent Yes | Description |
|-------|------|-------------------|-------------|--|
| LA | 1999 | Amendment 1 | 59 | Provide That Governor May Not Commute Sentences or Pardon Persons |
| | | | | Convicted Without A Favorable Recommendation By Board Of Pardons |
| LA | 1999 | Amendment 8 | 53 | Limit Automatic Pardon Provision To Persons Convicted of a Non-Violent Crime |
| MI | 1994 | Proposition B | 74 | A Proposal to Limit Criminal Appeals |
| MS | 1998 | Amendment 2 | | Victims' Rights |
| MT | 1998 | C-33 | 71 | Criminal Laws Must Be Based on Principles Of Public Safety and |
| | | | | Restitution For Victims As Well As Prevention And Reformation |
| NC | 1996 | Amendment 2 | 86 | Probation, Restitution, Community Service, Work Programs |
| | | | | and Other Restraints on Liberty May Be Imposed Upon Conviction of Criminal Offense |
| NC | 1996 | Amendment 3 | 78 | Victims' Rights |
| NE | 2006 | Amendment 4 | 56 | Permit Supervision of Individuals Sentenced To Probation, Released on Parole, |
| | | | | or Enrolled In Court Programs as Provided By Leg |
| NJ | 2000 | Public Question 2 | 79 | To Permit Leg To Auth By Law Disclosure Of Information Concerning Sex Offenders |
| NV | 1996 | Question 2 | 74 | To Provide Specifically For Rights of Victims of Crime? |
| OH | 1997 | Issue 1 | 73 | Denial of Bail In Felony Offenses |
| OH | 2002 | Issue 1 | 32 | Treatment in lieu of Incarceration for Drug Offenders |
| OK | 1994 | Question 664 | 91 | Allow the Legislature to set Minimum Prison Terms for All Convicted Felons |
| OR | 1996 | Measure 26 | 66 | Changes Principles That Govern Laws for Punishment of Crime |
| OR | 1996 | Measure 40 | 58 | Gives Crime Victims Rights, Expands Admissible Evidence, Limits Pretrial Release |
| OR | 1999 | Measure 68 | 58 | Allows Protecting Business, Certain Government Programs from Prison Work Programs |
| OR | 1999 | Measure 69 | 58 | Grants Victims Constitutional Rights In Criminal Prosecutions, |
| | | | | Juvenile Court Delinquency Proceedings |
| OR | 1999 | Measure 71 | 58 | Limits Pretrial Release of Accused Person To Protect Victims |
| OR | 1999 | Measure 72 | 45 | Allows Murder Conviction by 11 to 1 Jury Verdict |
| OR | 1999 | Measure 73 | 46 | Limits Immunity from Criminal Prosecution of Person Ordered To Testify |
| | | | | about his or her Conduct |
| OR | 1999 | Measure 74 | 53 | Requires Terms of Imprisonment Announced in Court Be Fully Served, With Exceptions |

Table 18: Ballot Propositions Used to Measure Penal Preferences (con'd)

| State | Year | Prop No. | Percent Yes | Description |
|-------|------|--------------------|-------------|--|
| OR | 1999 | Measure 75 | 57 | Person Convicted of Certain Crimes Cannot Serve on Grand Juries, |
| | | | | Criminal Trial Juries |
| OR | 2000 | Measure 3 | 67 | Requires Conviction Before Forfeiture; Restricts Proceeds Usage; |
| | | | | Requires Reporting, Penalty |
| OR | 2000 | Measure 94 | 26 | Repeals Mandatory Minimum Sentences for Certain Felonies, Requires Resentencing |
| OR | 2008 | Measure 57 | 61 | Increase Sentences for Drug Trafficking, Theft against Elderly and |
| | | | | Specified Repeat Property and Identity Theft Crimes |
| OR | 2008 | Measure 61 | 48 | Creates Mandatory Minimum Prison Sentences for Certain Theft, Identity Theft, |
| | | | | Forgery, Drug and Burglary Crimes |
| PA | 1998 | Joint Resolution 1 | 72 | Adding Categories of Criminal Cases in Which Bail Is Disallowed |
| PA | 1998 | Joint Resolution 2 | 69 | Granting Commonwealth Right to Trial By Jury in Criminal Cases |
| PA | 2003 | Amendment 1 | 68 | Amending Right of Persons Accused of a Crime To Meet Witness |
| | | | | against Them Face To Face |
| PA | 2003 | Amendment 2 | 80 | Auth Leg To Enact Laws Regarding Way That Children May Testify |
| | | | | in Criminal Proceedings |
| SC | 1996 | Amendment 1 (A) | 89 | Victims' Rights |
| SC | 1996 | Amendment 1 (B) | 87 | Allows Denial of Bail To Persons Charged With Violent Crimes |
| SC | 1998 | Amendment 1 | 48 | Allow Leg To Specify Which Crime Victims Are Protected By Victims Bill Of Rights |
| SD | 2002 | Amendment A | 21 | Relating To A Criminal Defendant's Rights |
| TN | 1998 | Amendment 2 | 89 | Entitles Victims of Crime To Certain Basic Rights To Preserve and |
| | | | | Protect Their Rights To Justice, Due Process In All Cases including Criminal Cases |
| UT | 1994 | Proposition 1 | 69 | Rights of Crime Victims |
| WA | 1993 | Initiative 593 | 76 | Sentencing of Criminals |
| WI | 2006 | Question 2 | 55 | Reinstate Death Penalty |

 Table 19: Ballot Propositions Used to Measure Penal Preferences (con'd)